323 thin acorn mush to produce a hard, nonabsorbent surface.

Two standardized shapes for cooking purposes -- and Yokuts pots were used for little else -- were a flat-bottomed, conical pot, often with two lugs, and a serving dish with flat bottom and flaring sides.[197] These are roughly comparable in shape to the deep, twined cooking basket and individual food basket. Shapes were not differentiated by name.

[274] Pipes of pottery were made. These are described and illustrated in the sources mentioned.

Tanning

281 Deer, wildcat, cougar, and bear hides were tanned. The first two, with fur removed, were the best skins for breechclouts and aprons. Cougar and bear hides were used as fur bed covers or were folded for seats of important men. My impression is that cougar hide was not much used. The cougar was difficult to approach within range for a deadly arrow shot; it was, within that range, highly dangerous and was feared for its physical as well as supernatural power. Only fine hunters dared kill the animal and, since many expert hunters had Cougar as their supernatural dream helper, they would not kill it.

[462] Men did tanning, although occasionally women finished wildcat skins for their infants or rabbitskins for blankets.

When a woman wanted a wildcat skin with fur on for her baby, she pegged it fur side down on dry ground or sand in a spot where dry air but not direct sunshine would play on it. In winter, direct sunlight would not be too strong. After all the adhering tissue had been scraped off with a dull obsidian scraper, she loosened the pegs so that the delicate skin would not tear as it shrank in drying. It was then left until dry, twenty-four to forty-eight hours. Then deer brains which had been soaked in water were rubbed over the skin; when the skin was quite wet it was taken up and the brains worked into the skin with the hands. This was a softening process, and only a bland solution of brains was used as it was not desired to loosen any of the hair on the reverse side. Again the skin was pegged out loosely and left. After a day or two the skin was taken up, rinsed off in water, and any remaining tissue was picked off. Finally it was wrung lightly with the hands and rubbed until soft. It was then hung on a pole to dry in the shade. Later it was again pulled, rubbed to soften and stretch the skin, and was shaken vigorously to fluff out the fur. "This made a nice little blanket," and was used carefully as

[197] Ibid., pls. 99-102; Kroeber, Handbook, pl. 51.

173 648 [609] catch an Indian. The people on the Creek had never seen any white people or Mexicans before; they were all scared and hid around in the hills. But some were caught, among them B.W.'s father, his brother, and himself A bullet had hit his brother. They went back into their village B.W.'s father was the headman and he asked the white men to leave their guns at home unless they wanted to have fights. The white men said they just wanted to make friends. Then his father called all his people together and told them to go down [where?] to the "white fandango." About twenty or thirty went and were given food, hats, and coats. Then others went down. They had been told to come once a month for presents.

A man [named Dover?] had one hundred and sixty acres of land where he wanted the Indians to be placed. All the headmen, Gashowu, Tachi, everybody, were sent for B.W. went with his father. The government wanted to make schools. Each morning two white men and [native] interpreters told them what was going to take place. Then a white man [Dover?] went over to Kings River to see the Indians there, but he got killed. The Indians called him Ca'wis. The government sent no money at this time. But this was the beginning of all bad things -- sickness and drunkenness -- and all the Indians went.

435 648 On another occasion B.W. declared that the high price of native basketry was due to the fact that some white land owners charged Indian women for the privilege of coming on their property to get the grasses and roots needed. He said that "over on Kings River" some men charged $2.50 a day for the gathering of basketry materials on their land.

KECHAYI

648 826 feel the wrists of their partners in the dance. If they had hard wrists, the Mono knew they were Mono also; if the wrists were soft, the dancers were Yokuts. The Eastern Mono conversed with the Yokuts through their linguistic [192] and cultural kin, the Western Mono people (Yayanchi and Posgisa). When these said the Yokuts were friends, the Eastern Mono left them alone.

648 462 222 E.M. recounted the story of a war with Mono people which occurred before she was born.

Long ago [before E.M. was born] a number of Yokuts people from the Chukchansi, Kechayi, and Gashowu tribes were camping east of Friant. They had all gone there for acorn-gathering. It was the general practice that the men, immediately after the morning meal, went out to shake down the acorns. Leaving these to be collected by the women, they then went off for the day to hunt or fish. Toward sundown they returned and helped the women crack the nuts.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29

361 these were built with the doors facing each other.

342 The whole family was concerned with construction of a new house. The men secured the poles, dug the holes for them with digging [462] sticks and set them up, while the women got the tarweed, string, and bark [sic], and did the thatching.

343 The ramada or shade as an adjunct to individual village houses was not described by any informants, though it was mentioned in passing. Presumably it was used by the Chukchansi as by other Yokuts tribes.

344 On the meadow near J.R.'s present (1938) home there was at one time a large communal shade of the type constructed to enclose a dance space and shelter the audience. This J.R. said was "just like a corral," which would imply that it had a back wall as well as a roof. One of the Ghost Dances was held at that place. People played games there, made cider, and cooked. This enclosure would accommodate four to five hundred persons, said J.R. When so many people were assembled and eating, "the women would be doing something, preparing food all the time."[102]

343 Storehouses and granaries.---A special
251 storehouse, structurally like a dwelling house, was built near the family home. One such storehouse might serve two or three adjacent houses occupied by related families. These storehouses had a conical frame, up to 6 feet in diameter at the base, and 7 or 8 feet high at the peak. [The walls were not described, but presumably they were of a thatch with bark overlaid: a dry interior was essential.] A bark door covered the entrance "to keep the wind and rain out, so things will keep dry all winter." The floor was covered with a thick layer of dessicated grass, weeds, or boughs, and on this the stuffed storage sacks were laid. "The heavy sacks were laid down, and the light things hung up." Salmon was hung on cross-poles, but jerked deer meat was stored in [skin] sacks. The meat and fish were taken out and examined from time to time for worms, bugs, or decay; contaminated portions were discarded.

251 It was not considered good practice to pile up too much stored food as it was awkward to handle and encouraged decay. Only enough food for one meal was removed at a time from the storehouse.

The supply of food in such a storehouse was expected to serve at least one family throughout the winter. A large family with
251 many children would be tided over lean periods
122 by their neighbors, should their food become
224 exhausted. Even in winter men went out to hunt every day, and women found late seeds, or some

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[102] "Neither the number nor the activity is exaggerated if we are to judge by accounts of other Yokuts assemblages (Gayton, Estudillo, 74); Powers (p. 385) estimated "about 300" at the Chukchansi ceremony he witnessed.

1: Gayton E-5 (1925-1930) 1948 N529 Yokuts N529
EP. 187b] Chuckchansi

251 222 224 which had been overlooked, to add to the stored supply.

Some years the seed and berry crop was 261 scarce. Under famine conditions, when food was 731 actually all gone, people warmed water and drank it. [J.R. did not state when or how often famines occurred; presumably very seldom. -- A.H.G.]

343 Each family had an acorn granary. These were constructed by sinking four posts about 2 feet into the earth, allowing them to extend 8 to 10 feet above. On the ground, and up to about 2 feet, was piled and packed brush or grass to form a nestlike base for the acorns. The walls were of "worm wood" (mesini) stalks of finger thickness. The butts of the stalks were embedded in the fibrous base mass and then twined with cord (s'atip) in paired horizontal bands with space between, thus forming a circular wall. As the granary was built, it was filled. This stretched the walls, which were 3 to 4 feet in diameter. Since the wall stalks were not as long as the frame posts, upper sections of the twined wall were added as needed. When the granary was full, pine [or cedar?] bark was laid on top and weighted down with a couple of heavy stones. To protect the sides from rain, strips of old bark were tied around it. Normally a granary was built in a sunny dry place, as near the owner's house as possible, as the one thing feared for acorns [789] was dampness. To prevent moulding, three buckeye balls were always laid in with the acorns. It was said by the informant N.W. that squirrels, rats, and other rodents never entered.

251 The average granary held ten to twenty 343 sacks [native or modern?] of acorns; N.W. had one once which held twenty sacks. To reach the acorns at first, three people were needed: one who climbed on top, one clinging to the sides, and one on the ground. No ladder was used; the [417] woman owner climbed up the sides by means of the woven walls. As the supply diminished, the upper wall sections were removed. The contents of such a granary might last two years.

Each family had its own granary, which was used and repaired indefinitely. If it got wet within during the winter, a new one was built, the acorns dried and restored. The damp granary would be repaired or not, after summer drying, just as the owner might wish. [N.W. did [462] not state whether men or women built granaries; perhaps men sank the frame posts, women did the twined side wall. Once built, it is evident that it was a woman's responsibility, if not personal possession. -- A.H.G.] Acorns of 251 black oak were stored without shelling, and dried in the open airy granary before bark was tied round it. White oak acorns were shelled, dried, and put away in sacks in the dwelling or storehouse to protect them from moisture. N.W. still gathers acorns (1938), and has about six sacks in her attic which she had kept three years.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29
LP.215b] Western Mono NS25

SHELTER, DRESS, BODILY ORNAMENT

Structures

W Y 342 **Houses.**---The houses of the Michahai and Waksachi were thatched; mats of tule or other materials were rarely used and these only at the houses at the seed-gathering sites at the edge of the plains. The frames were either conical or oval. Bark houses were known and were preferred as more substantial, but these could not often be made because of the difficulty in getting cedar bark.

The conical thatched house (če'ˑ ´naho ya´owˑl, house [of] "weeds") was the usual type for Michahai and Waksachi. A circular space 9 to 12 feet in diameter was excavated to the depth of about 1 foot; this depression was called hiˑ´č (sleeping-place). Several long straight poles, willow preferred, were set with their butts inside the edge of the depression and brought together at the top by means of a ring of willow (wi´čˑt soto´li, stick round) some 18 to 20 inches in diameter. This hoop was inserted at the top to hold and separate the poles (fig. 5, a, Pt. I).

W Y ● [462] Around the uprights were three or four horizontal willow withes tied on with ho'o (willowbark rope). The lower ones were stood upon in order to reach the higher. "Men did most of this work but women might help." The women's job was the making of the thatch -- a "skirt" of long grasses (yaowˑl) and fine willow bunched in small handfuls and twined along their butt ends. Another horizontal withe was laid over the bound edge of the thatch to the frame when the outer withe, the thatch, and the horizontal band of the house frame were all lashed together with rope (fig. 5, a, Pt. I).

The doorway (tiše´hi) was about five feet high, "a man had to stoop a little to go in." Usually the top of the doorway was the second horizontal frame withe: the first band ended each side of the doorway The door itself, said to be wholly aboriginal and called ča´kilˑš ača´li (not translated), was a mat -- or, more properly, a screen -- of twined fine willows, which was tied on to one of the side poles of the doorway.

W Y [354] A hollow dug in the center of the floor was the fireplace (u´stun ho'o´hi, fire spot or place). If long fire logs were burning, as they most frequently were, their ends extended far out the doorway. The smoke found its way out the ringed apex, the "smokehole" (mutsa´kan tana´hi, smoke goes).

The interior of the house wall was not finished in any way. When leaks occurred, new pieces of thatch were tied on outside, or tied from within if the leak could not be located from the outside.

People slept and sat close to the fire. Baskets and utensils were set around the very low outer edge. Poles were laid across the

[P. 218 9] Western Mono NS.25

W Y 291 A sewn leather jacket was denied by S.O., yet other informants said a sort of sleeveless jumper with side seams could be bought from the Eastern Mono. (It is possible S.O. misunderstood my query.)

W Y [237 439] Rabbitskin blanket.---The Michahai and Waksachi, when on their camping trips to the lower foothills, caught jack rabbits. Sometimes they bought rabbitskins from Wukchumni, Gawia, and Telamni. They also saved and used the upland rabbitskins for blankets.

W Y 292 237 Dance costume.---The shaman's dance skirt, which he wore on all dress occasions, consisted of many 18- to 24-inch pendent strands of ša' string into which chicken-hawk down had been rolled. Each strand was tipped with a bluejay or flicker quill.

The headdress consisted of the usual two parts, the vertical feather bunch (čuha´o, Michahai; čuha´bⁱ, Waksachi) made of roadrunner quills, and the soft fluffy crown (se´ma, Michahai; sema´bⁱ, Waksachi) of crow feathers.

W Y 292 462 435 The skirt was made by either men or women, but the headdress was made only by men. An old man at Kičeyu (Dunlap) named Ko´'o was particularly skilled at making headdresses, which he sold at a price somewhat equivalent to $10.00

W Y 301 304 Ear and nose plugs.---Everyone, said S.O., had his or her ears punched. This was done with a fine pointed manzanita stick. The heated point was pressed from in front against the lobe, behind which was pressed a small flat stone. The stick was pushed on into the hole and left until the wound healed. Then a series of increasingly larger sticks were inserted. Cane tubes were sometimes inserted, and the men's quail-feather ear plug of the Yokuts was used. A women's ear plug, also derived from the Yokuts of the plains, consisted of a ring of abalone shell (li´la, Michahai) which fitted the aperture like a plug, and from which dangled short strands of clamshell-disc beads.

Similarly, in the old days, both men and women had the nasal septum pierced. A single humana shell bead was the favorite ornament for this aperture.

Y W 304 Tattooing.---There were no special practitioners of this art, "anybody could do it." The design was pricked in the skin with the point of a fine obsidian blade and charcoal was rubbed in the abrasion. The patterns were stereotyped. Women had vertical lines from lower lip to chin, but these were never used by men. Both sexes used horizontal lines running from the corners of the mouth to the ears, and bandlike lines on the inner wrist. Two old women, Bren and Sugarfoot, were noted for their ambitious decorations which consisted of straight wide lines commencing on the chin and continuing down throat, chest, and breasts.

W Y S.O. could recall no other kinds of designs.

363 [192] Paint.---Face and body paints were hapa´ka o čːk (red), toiye´'i očːk (white), and mutskei´wːk očːk (black, i.e., charcoal) [all teams Michahai.]

W Y 222 262 Yucca.---The yucca plants (o·´pa°dra, Waksachi) which grow on the mountains to the south and east of Eshom Valley (on Carpenter's Hill, B.O.)[163] were secured for food. In the fall men from Eshom Valley, mostly Waksachi, went up to dig up the roots which they brought back to roast. In the spring they again went up to break down with hooked sticks (po´dos) the tall blossom buds (o´b¹) and returned with them in back-packs. At home they were cut into 18-inch lengths, and laid on a large coal fire. As the stems cooked, they were turned with a long pole. When removed from the fire, the exteriors were caked with a hard ashlike substance which was scraped off. Then the pieces were split open and the tough pulp of the interior was chewed to extract the sweet juice and the pulp was spat out. The whole process of gathering and cooking was men's work; one fire served for the group who divided up the yucca after it was cooked. B.O. said the cooked food was often dried, pounded up, and stored for winter use.

Y W [252] [462] 251

Piñon nuts.---Pine nuts (pone´diw², Waksachi) were obtained in the hills east of Eshom Valley, near Ox Springs. Waksachi and Patwisha families went camping there to get them in the late summer (August-September). A long pole with a shorter one tied to it at an angle made a strong hook with which the men hoisted themselves into the trees and hooked and knocked down cones. The cones were full grown but still in a "green" or unopened state.

Y W [481]

At the camp the cones were piled on a big fire of coals and turned with long poles until their exteriors were burned and ashy. Removed, they were piled in a big heap where they steamed as they cooled. Sometimes the cones were taken home, but more often the nuts were extracted on the spot. This was done by holding a cone butt down on a basket tray. With an obsidian blade the tip end was cleft four ways; the outside of the cone could then be stripped down in sections by hand. This let all the nuts drop out on the basket. Occasionally the nuts too were cracked on the spot and only the meats taken home.

W Y 262 252

Piñon nuts from Owen's Valley, brought over for trade by the Eastern Mono were called te°wa. They were superior to the local variety.

[439]

Acorns.---Fine groves of black oaks grew on the floor and slopes of Eshom Valley. It was the men's task to knock down the acorns while they were still slightly green; this was accomplished by means of the wooden hooks used also for piñones and cactus. The women picked them up and carried them home in burden baskets. All returned home in midafternoon. Everyone in the family assisted with shelling the nuts, which were shelled before being stored in the house. Sometimes one person would crack them and another do the shelling. For cracking, the

W Y 222 262 [462] [251] W Y 262 252

[163] Probably also on Cactus Mountain.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29
[P.226 a] Western Mono NS25

W Y 323

Pottery

Pottery was well known to the Michahai and Waksachi; in fact, all informants thought that "everybody" had it and that "all women" knew how to make it.[164] B.O. said the Eastern Mono had it also. The earthenware was called ki´wiš (clay) by Michahai and wi´šowa (clay) by Waksachi. There were no special names for dishes of different shapes, all being called merely big or little dish (wu´pi kiwiš, wi´či kiwiš, Michahai; popai´ wišowa, tiči´ti wišowa, Waksachi). All the ware was flat-bottomed and straight-sided, and roughly of three sizes, large bucketlike containers for boiling, medium individual serving dishes comparable to the individual serving baskets, and small somewhat spherical dishes used as cups or scoops. The latter are probably not copies of European cups since no handle nor curvature is ever attempted. B.O. firmly stated that food was never eaten directly from the clay dishes, always from baskets. D. and S.O. could not agree, but admitted that baskets were the customary food dishes. Pottery was prized, and probably no woman would trust the dishes in children's hands. S.O. thought the average family would have about two large cook pots and five smaller ones.

W Y 323 415

Men never made pottery but, if a man came upon a good clay bed, he might take some home to be made up (S.O.). There was an abundance of good clay at Tušao; women of Čitatu liked to go to Daley's place for theirs.

[462]

W Y 323

The clay was tested between the fingers for sand element (the binding), as no extraneous binding, not even free sand, was added. The clay was pounded while damp on rock with a special pestle, and when viscous was ready to make up. The bottom was pressed out between the palms (D. and S.O.), coiled (B.O.), into a disc and the sides built up with additional coils. A little water was kept at hand to add to the clay if it became too dry. The inside and outside were scraped smooth. The raw pots were left in the sun to dry all day, or even longer if necessary: they must be dry all the way through before firing. These informants did not know of any "test" for predicting safe firing (see Wukchumni). Meanwhile wood was burning in a small pit so that it would be thoroughly heated and partially filled with coals. The ware was heated at the fireside before being put directly on the coals. More wood was drawn over the top and the whole left to burn all night. A woman had to rise once or twice during the night to see that all was well. No slip of mush or other material was applied after firing (or at any time) according to these informants (see Wukchumni).

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[164] The pottery-making process and pottery shapes are described and illustrated in Gayton, Yokuts and Western Mono Pottery-Making.

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29
Yowlumne

Before it was disturbed by white people, Reeder Hill extended diagonally across where the present Santa Fe passenger station is located from about the center of the court yard between the High School shops, to the intersection of Sixteenth and D streets. A branch of Kern River ran close by the west end of Reeder Hill. It actually came almost to the intersection of Truxtun Avenue and A streets. 361 172

When Colonel Thomas Baker came to the site of present Bakersfield in 1863, a large group of Yowlumne Indians lived in the two villages, one on each side of the river at the west end of Reeder Hill. The late Thomas A. Baker told me that his father, Colonel Thomas Baker, for whom the City of Bakersfield is named, often sent him down to Reeder Hill to bring Indians to work at their home. This log home stood near the intersection of Nineteenth and M streets. These Indians, the most willing often being men, made gardens, washed clothes, scrubbed floors, mended clothes, cut firewood, cared for children and did all sorts of housework. They were the first baby sitters in Bakersfield. 361 [464] [357]

Other Yowlumne villages and camping sites were scattered about the plains near where Bakersfield is now located. But they were not permanent villages, as the Indians were forced to move when high water flooded the plains adjoining the sloughs and branches of Kern River, and also when the flow of Kern River switched from one slough or branch to another.

Soon after white people began to settle on the site of present Bakersfield, the Yowlumne began calling the locality *Wawlu*, meaning Planting Place. This was because the white settlers began planting crops. [103]

THE YOWLUMNE INDIANS

The *Yowlumne* were a typical Yokuts group. Their language was almost identical with that of nearby Yokuts tribes. They were, like the rest, a happy, friendly, dependable people. The first settlers on lower Kern River found it perfectly safe to to take them into their pioneer homes to perform housework of all kinds. This was true of both men and women, for often the Yowlumne men did washing, dishwashing and the scrubbing of floors as willingly as did the women. 101 181 [462]

At this time, 1949, there are two full-blood Yowlumne Indians still living. This will come as a surprise to some readers, 161

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

[p. 104 not Processed]

CHAPTER VI

FOODSTUFFS

GATHERING AND STORING ACORNS

262 222 The acorn, which the Wukchumne Yokuts called *poo'-tus*, was the staple article of diet for most California Indians. It was stored, prepared, and eaten in large quantities and was the most common food consumed by them.

Indians living near the foothills preferred the mountain (Kellogg) acorns to those grown in the valley. The foothill scrub-oaks are smaller, and produce a smaller acorn, which contains a great deal of bitter tannin. The valley oaks bear a large acorn, often three inches in length and almost one inch in diameter. It is sweet, but according to the Indians, does not contain the nourishment found in those borne by the mountain oaks.

The process of gathering and preparing acorns entailed an immense amount of labor. The trees bearing the crop were often several miles distant from the rancheria. An Indian family would consume from one to two thousand pounds of [482] acorns a year. They were carried to the rancheria on the backs of the *mokes* (mo'-kees, women.) The harvesting took place [462] when the acorn crop had nearly all fallen from the tree. At this time, during the years of a good crop, the ground under the trees was almost completely covered with acorns.

[285] The Indian women used a flat-bottomed basket in gathering acorns. Stooping over, they slipped the basket along the ground and rapidly tossed the acorns into it. When the basket was full, it was taken to a burden basket and emptied. The burden basket was called *ahng'-ush* and was made of light, twined material in the shape of an inverted cone, being about twenty-four inches across the large, upper end and from two to three feet in height. The pointed end of this basket was often thrust into a squirrel hole to hold it upright while the acorns were being emptied into it, or the basket was leaned against a rock, or the trunk of a tree.

[482] When the ahngush was filled with acorns it was placed upon the back of one of the mokes. On top of the load she

[Hart continues on p. 107]

5: Gayton E-5 (1925-1927) 1929
NS29 Yokuts NS29
Western Mono NS25

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METHODS OF POTTERY-MAKING

Interest attaches to the pottery-making methods employed by Yokuts and Western Mono groups since they presumably represent the extreme peripheral cases of the Pueblo non-paddle ceramic technique.[3]

Descriptions of pottery-making were obtained from several Yokuts informants living in the foothills, but at the time the ground was too dry from the summer season to permit digging for clay. The following January a Wobonuch Western Mono informant, Jane Waley, of Dunlap, Fresno county, made pottery to demonstrate the method: her procedure corroborated the descriptions of the other informants. Her method will be taken as typical, for pottery-making is practically identical in all San Joaquin valley groups from which data have been obtained. The variations will be mentioned below.

Further corroborative evidence appears in the notes which S. A. Barrett left with his collection. A Yaudanchi woman, apparently Mary Sanwaihat,[4] made pottery for him. The method which he witnessed, and the models of pottery bases in his collections, are in keeping with the data obtained by the present writer.

Pottery-making was always a woman's task. If a man's family was in a strange neighborhood and he found a clay bed, he might bring some clay home to his wife. Not all women knew how to make pottery but this "was because they were stupid or too lazy to try," according to this informant, and not due to any social, economic, or functional restriction. Although pottery was sold to such women by those who made it, neither a standard price nor a professional manufacture developed. The "sale" was usually a friendly exchange for basketry or acorn meal.

Pottery was usually made in the spring when the ground was soft enough for digging and the sunlight sufficiently warm to dry the pots before firing. Large lumps of clay were frequently taken home, dried, and stored for use at other seasons. The necessary type of clay was reported as abundant by most informants of the pottery-making groups.

[3] E. W. Gifford, Pottery-Making in the Southwest, this series, 23:353–373, 1928.
[4] Cf. fn. 1.

533 Therefore the compression occurs after the third repeat of the first phrase, after the second repeat of the second phrase, and so on.

533 Almost all the songs were sung by both males and females with no apparent
462 difference or "parts" such as found on the northwest California coast. One of the exceptions to this statement is the single work song recorded -- the Acorn Grinding Song. This song was sung only by the women, who did the acorn grinding, while the males did not, or pretended not, to know it. It is true that the males knew more songs than the women; no reason was given why the women could not sing them if they wanted to. The one example of harmony, which occurs in the Sopas Song, is certainly accidental.

533 The tempos ranged from andantino to vivace, from 63 beats to 138 beats per minute, with the bulk of the songs falling at the latter end of the scale. In some of the songs there was considerable rhythmic variation. This was for two reasons: the first was that some of the songs, like the Deer Song mentioned above, were supposed to be sung without a fixed beat. The second reason for variation stemmed from the fact that individual singers, when singing alone, could and would vary rhythm and melody much more than when the group sang together. The combination of the group's clapsticks and singing would carry the song to its conclusion with a minimum of discontinuity.

The spread of the melodic contour was rarely over eight or ten semitones, with the largest group falling between six and seven semitones. This is in contrast with the northwest California coast, where an octave and one-half are extremely common, especially in the Brush Dance and White Deerskin Dance Songs. This again contrasts with the limited spread which is found among
[171] the Modoc, Shasta, Achomawi, and other north central and northeastern groups. Among these groups melodic spreads of three or four semitones are not uncommon, and there is one grass game song, recorded by Dr. Kroeber, characterized by a two semi-tone spread.

The scale was predominantly pentatonic, although the limited spread of some of the songs made it difficult to evaluate. Some, but not all, of the songs showed a definable rise. The rise in Tachi music can best be described as a low-pitch low-contrast section alternating with a rise of a fourth or a fifth and a descending lyrical passage back to the low-pitch low-contrast section. The Tawanic or Morning Song shows a rise beginning in the 5th measure, and again in the 18th. The Lizard Handgame Song #4 begins with a rise.

Another feature of the songs was the sparseness of lyrics. Most of the songs averaged no more than two or three phrases totaling 10-12 syllables. Common repetition patterns for lines were:

1,1,1,2,2,1,1,2,2; 1,1,1,2,2,2,1,1,2,2,3,1,1;

and so forth. The repetition of the Lizard Handgame Song showed some variation:

1,1,1,1,2,1,1,1,1,1,1,2,2,1,1,1,2,2,1,1,1,2,2,1,1,1,1,2.